

REPLACEMENT CLAIMS

b2 ABC1 > 19. (twice amended) A dual damascene structure comprising:

a semiconductor substrate;

a first insulating layer provided over said semiconductor substrate;

a metal layer provided within said first insulating layer;

a second insulating layer provided over said metal layer;

a via situated within said second insulating layer and extending to at least a portion of said metal layer, said via being lined with an organo-metallic-atomic deposited titanium-silicon-nitride layer and filled with a copper material;

a third insulating layer located over said second insulating layer;

a trench situated within said third insulating layer and extending to said via, said trench being lined with said organo-metallic-atomic deposited titanium-silicon-nitride layer and filled with said copper material.

b2 ABC3 > 31. (twice amended) A damascene structure comprising:

a semiconductor substrate;

a first insulating layer provided over said semiconductor substrate;

a metal layer provided within said first insulating layer;

at least another insulating layer provided over said metal layer, said at least another insulating layer including a material selected from the group consisting of polyimide, spin-on-polymers, flare, polyarylethers, parylene, polytetrafluoroethylene, benzocyclobutene, SILK, fluorinated silicon oxide, hydrogen silsesquioxane and NANOGLASS; and

*b2
var*

at least one opening situated within said at least another insulating layer and extending to at least a portion of said metal layer, said opening being lined with a titanium-silicon-nitride layer and filled with a copper material.

sub C8

b3

40. (twice amended) A processor-based system comprising:
a processor; and
an integrated circuit coupled to said processor, at least one of said processor and integrated circuit including a damascene structure, said damascene structure comprising a metal layer provided within a first insulating layer formed over a substrate, at least another insulating layer provided over said metal layer, and at least one opening situated within said at least another insulating layer and extending to at least a portion of said metal layer, said opening being lined with an organo-metallic-atomic deposited titanium-silicon-nitride layer and filled with copper.